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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/617,556	07/17/2000	Douglas P. Hart	MIT-04488	8301
23535	7590	07/26/2004	EXAMINER	
MEDLEN & CARROLL, LLP 101 HOWARD STREET SUITE 350 SAN FRANCISCO, CA 94105			BINDA, GREGORY JOHN	
			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 07/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/617,556

Applicant(s)

HART ET AL.

Examiner

Greg Binda

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-31 and 33-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-31 and 33-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 3679

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 3, 2004 has been entered.

Claim Objections

3. Claims 31 & 39 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. It is not clear how claims 31 & 39 further limit the subject matter in claims 25 & 33 respectively, given that claims 25 & 33 each recite that the outer peripheral edge has a circumference (i.e. is curved).

Claim Rejections - 35 USC § 102

4. Claims 25 & 28-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Workman, US 3,497,225.

- a. Claims 25 & 31. Figs. 1-5 show a seal assembly comprising: a first surface 30, said first surface 30 comprising a unitary seal ring 14, 20 bonded (see also col. 2, line 52) to a mounting ring 18, the seal ring comprising a curved outer peripheral edge 28 and

circumferentially located protrusions 43, 45, 47 interior to the outer peripheral edge extending outward from the first surface 30; and a second surface (see "circumference" in col. 3, lines 5 & 6) in motion 57 relative to the first surface. Fig. 6 shows that the first and second surfaces contact and produce a seal by creating a region of intensified contact. Fig. 2 shows the outer peripheral edge 28 is raised.

b. Claims 28 & 29. Fig. 5 shows the protrusions 43, 45, 47 are identical and equidistant.

c. Claim 30. In col. 4, line last and col. 5, line first, Workman discloses that the motion 57 is rotational.

5. Claims 25 & 28-31 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by any one of Vossieck et al, US 4,084,826 and Grorich, US 3,973,781.

Claim Rejections - 35 USC § 103

6. Claims 25, 26 & 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McNickle et al, US 5,558,341 (McNickle).

a. Claims 25 & 31. Figs. 1-4 show a seal assembly comprising: a first surface 42, said first surface comprising a seal ring 8 bonded 43 to a mounting ring 2, 24, the seal ring comprising a raised outer peripheral edge 48 and protrusions 66 interior to the outer peripheral edge extending outward from the first surface 42; and a second surface (of the shaft 6) in motion relative to the first surface. Fig. 1 shows that the first and second surfaces contact and produce a seal by creating a region of intensified contact. Fig. 3

Art Unit: 3679

shows the outer peripheral edge 48 is curved. McNickle shows the seal ring 8 comprises four separable segments 10, but does not show the seal ring in the form a unitary ring. However, it would have been obvious to one of ordinary skill in the art to integrally form the segments 10 into a unitary seal ring, since such a modification would have involved a mere making integral an assembly of separable parts. Making integral an assembly of separable parts is generally recognized as being within the level of ordinary skill in the art. *In Re Larson*, 144 USPQ 347 (CCPA 1965).

- b. Claim 26. Figs. 3 & 4 show the protrusions 66 include recesses 68.
- c. Claims 28 & 29. Figs. 3 & 4 show the protrusions 66 are identical and equidistant.
- d. Claim 30. In col. 4, line 35, McNickle discloses that the motion is rotational.

7. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Workman in view of Blackman et al, US 5,452,771 (Blackman). Fig. 5 shows the textured surface 30 with protrusions 43, 45, 47 that have triangular shape, but does not show the protrusions with a cylindrical shape. In Figs. 4B & 4C, Blackman shows that a textured surface having triangular protrusions and a textured surface having cylindrical protrusions are art recognized equivalents. It would have been obvious to one of ordinary skill in the art to modify the seal assembly of Workman by making the textured surface with cylindrical protrusions instead of triangular protrusions since textured surfaces with cylindrical protrusions and triangular protrusions are art recognized equivalents as shown in Blackman.

Art Unit: 3679

8. Claims 33 & 36-39 rejected under 35 U.S.C. 103(a) as being unpatentable over Workman in view of Fern, US 3,930,655. As noted in item 4 above, Workman show a seal assembly including all the limitations of the claims except Workman shows the seal ring surface on a stationary member instead of a member that is in motion. In Figs. 8 & 9 Fern shows that a seal assembly with a seal ring surface on a member in motion (Fig. 8) is an art recognized equivalent of a seal assembly with its seal ring surface on a stationary member (Fig. 9) Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the seal assembly of Workman by attaching the seal ring to a member in motion instead of one that is stationary because a seal assembly with a seal ring attached to a member in motion is an art recognized equivalent of a seal assembly with a seal ring on a stationary member as shown by Fern.

9. Claims 33 & 36-39 rejected under 35 U.S.C. 103(a) as being unpatentable over any of the references cited in item 5 in view of Fern for the same reasons noted in item 8.

10. Claims 33, 34 & 36-39 rejected under 35 U.S.C. 103(a) as being unpatentable over McNickle in view of Fern, US 3,930,655 for the same reasons noted in item 8.

11. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Workman in view of Fern as applied to claim 33 above, and further in view of Blackman for the same reasons noted in item 7.

Response to Arguments

12. Applicant's arguments filed June 3, 2004 have been fully considered but they are not persuasive.

a. Applicant argues that Workman fails to show the claimed invention because in Workman the outer edge 28 is described in col. 3, line 10-11, as an inner edge. However, the terms "inner" and "outer" are relative terms that relate to one's frame of reference. Perhaps Workman's frame of reference places the inside as everything to the left of the case 10 in Fig. 1 and that is why the edge 28 is called an inner edge. Such a frame of reference has no bearing on whether Workman reads on the claims. In order for Workman to anticipate the limitation, it only matters that the edge 28 could appropriately be termed an outer edge. Since Fig. 2 clearly shows that the edge 28 is an outer edge if the right side of the figure is considered "inner", it is proper to call the edge 28 an outer edge.

b. Applicant argues that Workman fails to show protrusions 43, 45, 47 as being interior to the edge 28. However, in Figs. 2 & 5, Workman shows the protrusions interior to the outer edge 28.

c. Applicant argues that both Workman and McNickle fail to show the claimed invention because in both the respective protrusions are not limited in location to one edge. However, even if that were so, it is not clear why it would matter. Nothing in the claims requires the protrusions to be limited in location to one edge. Why then would the prior art need to show such a feature?

Art Unit: 3679

d. Applicant's arguments with regard to Vossieck and Grorich fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

e. Applicant argues that the prior rejections are invalid because they cite six references and that using so many references in an attempt to establish obviousness is an indication of non-obviousness. However, even if such an argument were grounds for overcoming a rejection, the argument is moot because in the present case no single claim rejection relies on more than three references. In effect, applicant is arguing that his claims are patentable because numerous (as opposed to a few) references show that they are obvious. If that were the case, then every ordinary, commonly used product known to man would constitute a patentable invention.

f. In response to applicant's argument that Blackman is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Blackman is in the same field of applicant's endeavor, seal assemblies, and so Blackman is analogous art.

Art Unit: 3679

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Metz shows a seal assembly.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Binda whose telephone number is (703) 305-2869. The examiner can normally be reached on M-F 9:30 am to 7:00 pm with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (703) 308-2686. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Greg Binda
Primary Examiner
Art Unit 3679